# Excel Basic

Excel is a **spreadsheet program** that allows you to **store, organize** and **analyze** information. Common uses for Excel include:

- Number Crunching
- Creating Charts and Tables
- Organizing Lists and Data

**Learning Objectives**

- Be able to navigate and manipulate Excel's layout and user interface
- Be able to enter, cut, copy, and paste data in Excel
- Be able to use basic formulas and functions
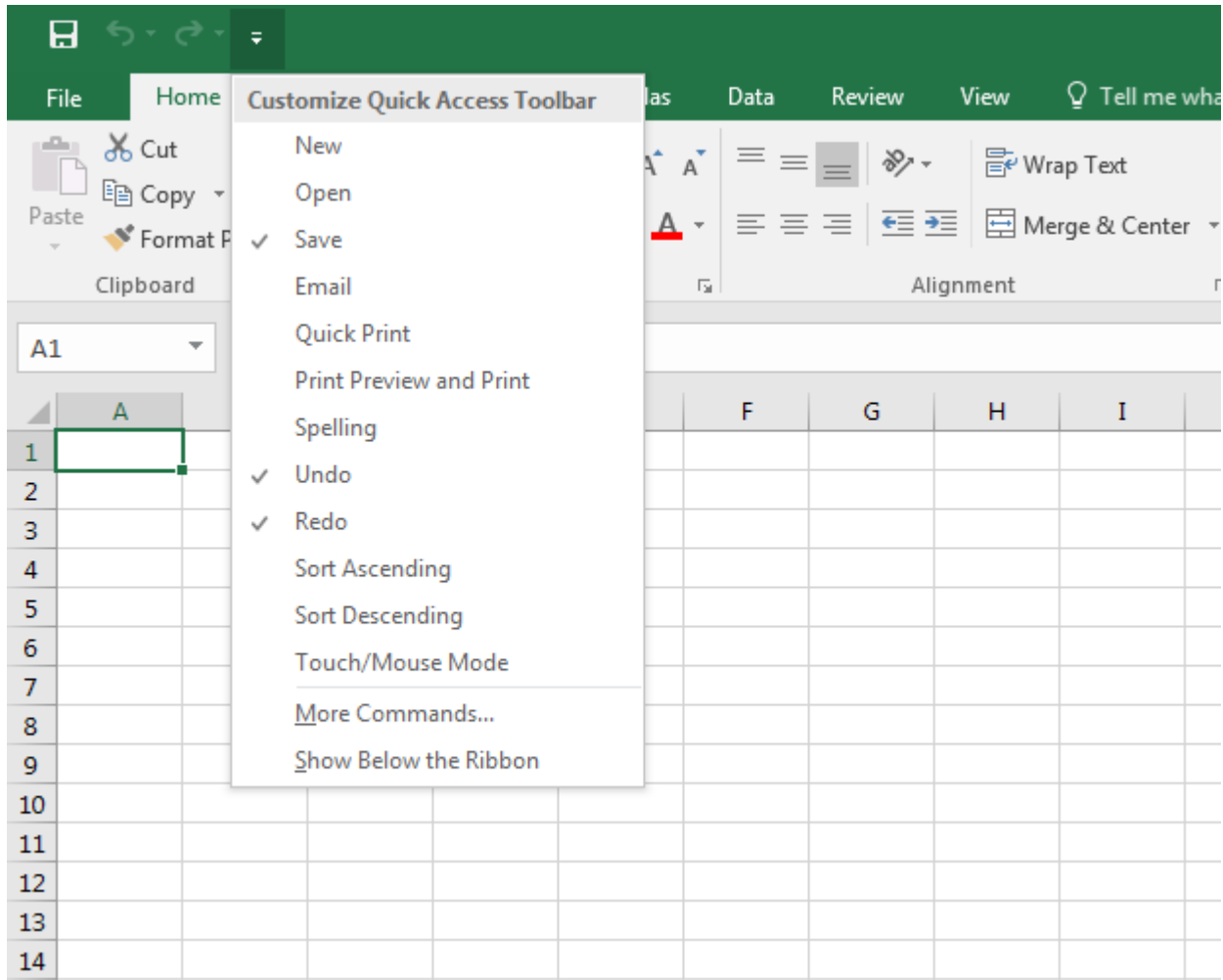
## The Excel Interface
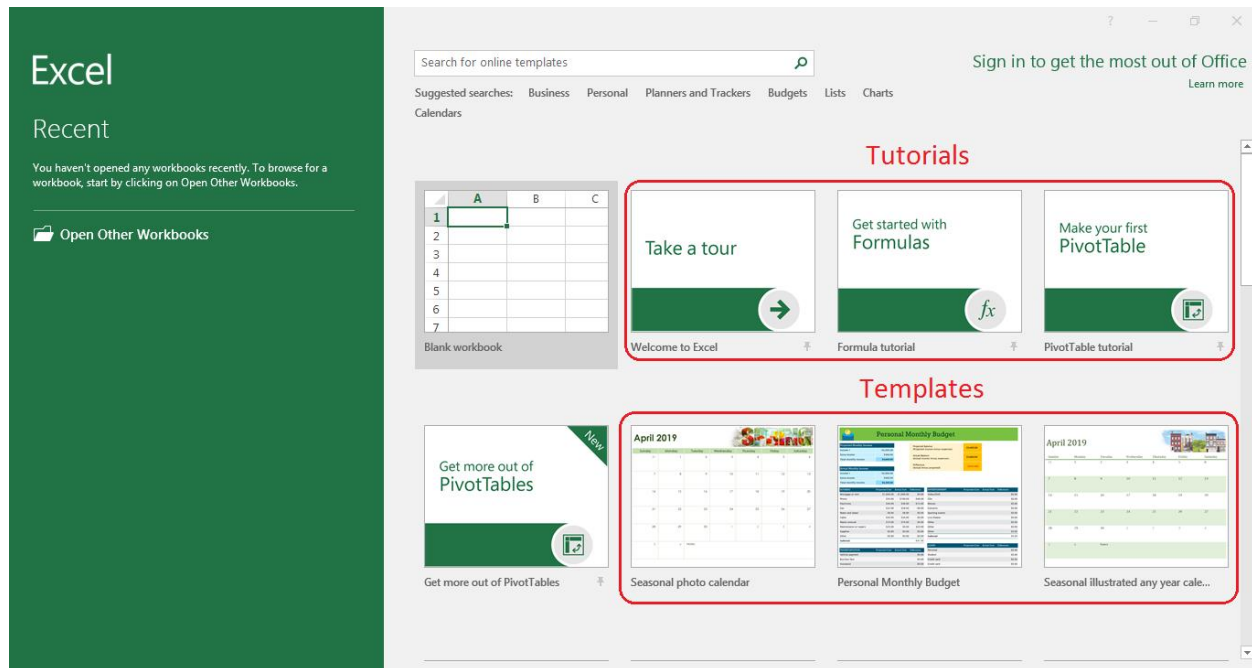


This is the Excel start screen. The start screen has buttons for:

- Creating a blank workbook
- Familiarizing yourself with Excel by going through one of the tutorials
- Starting with a template

You can find more templates by scrolling down the start screen.

**The Layout**



At the far top left corner of the screen is the **quick access toolbar**. You can customize this toolbar to provide shortcuts to your most commonly used commands by left clicking on the button for its drop-down menu.
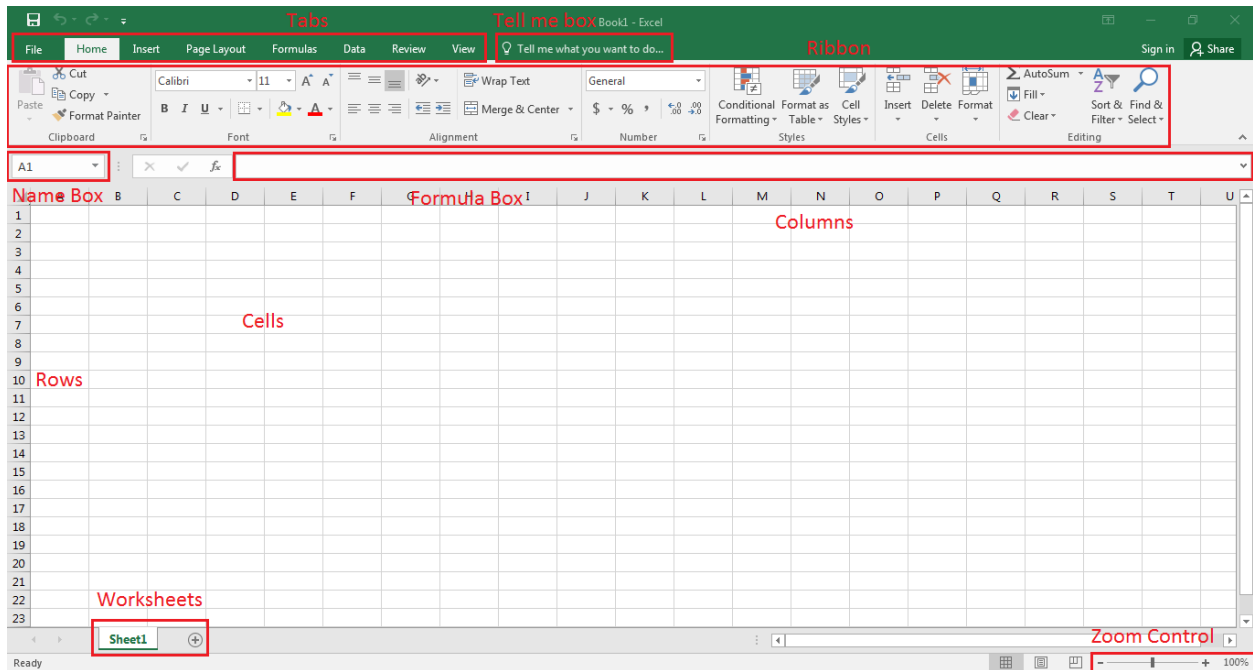
Located toward the top of the screen are the **tabs**, the **ribbon**, and the **Tell me box**. The ribbon contains buttons for various Excel commands. The tabs allow you to switch between different groups of commands. The Tell me box works like a search bar that helps you quickly find the tool or command you want to use.

Excel is organized as a grid of rectangles called **cells**, each of which can hold data. The rows are labeled in numerical order, and the columns in alphabetical order. The green box indicates which cells are currently selected.

The **name box** beneath the left side of the ribbon tells you which cell is the **active** one – the cell that you will enter data into if you begin typing. If you select multiple cells, the active cell will typically be the one at the top left. Notice that the name box gives the name of the active cell as a letter plus a number – this tells you the column and row of the active cell. For example, the cell in the top left corner is A1. This is known as a **cell address**.

To the right of the name box is the **formula bar**. This is mainly used for formulas and its use will be explained in a later section.

Down at the bottom of the workbook are the worksheet and zoom control options. Worksheets behave like pages in a notebook, and allow you to better organize your data by placing different content on different worksheets. You can

add a blank worksheet to your workbook by left clicking on the plus button to the right of your list of worksheets.

If you add a worksheet, you should see two tabs at the bottom of your screen labeled Sheet1 and Sheet2. Left clicking on a tab will switch you over to that worksheet.
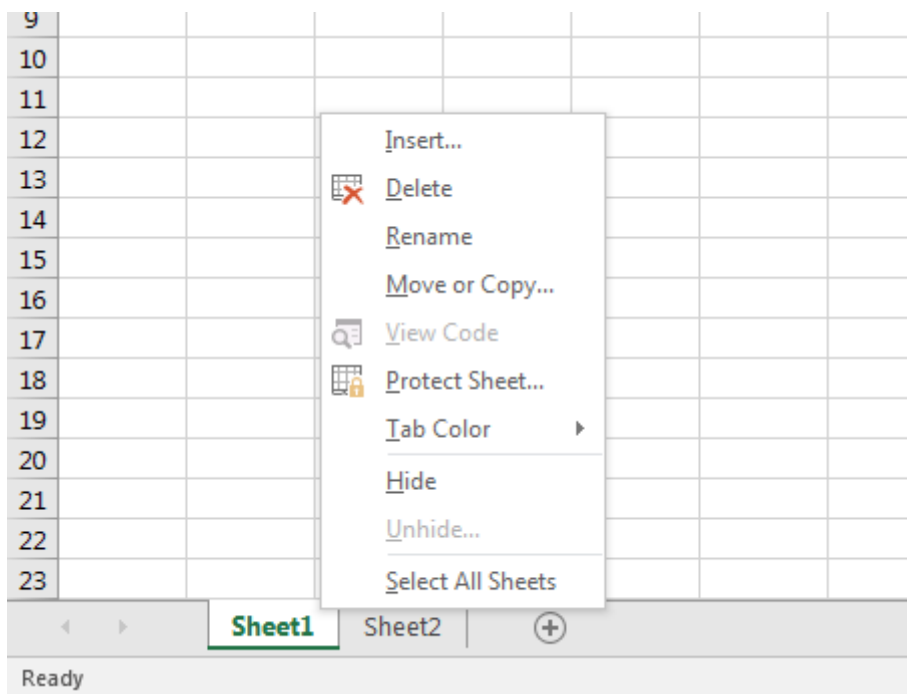


You can right click on a worksheet tab to bring up a menu that allows you to delete, rename, move, copy, or color code worksheets. As with most computer applications, left click is generally used to select and use tools and commands, and right click is used to bring up contextual menus that offer additional options.

Finally, you can use the scroll bars toward the bottom right of the screen to go to other parts of your worksheet.

**Selecting Cells**

Select a cell by left clicking on it, or select multiple cells by clicking a cell while holding down the left button and dragging your cursor across the cells you wish to select. Select an entire row or column by left clicking on the row number or column letter. Click and drag also works for selecting multiple rows or columns.

You can also select a range of cells by left clicking on the first cell you wish to select, holding down the Shift key, and then clicking on the last cell you wish to select. To select non-contiguous cells, rows, or columns, hold down the Ctrl key as you make your selections.

**Navigating and Entering Data**

To enter data into Excel, select a cell and begin typing. What you type will be stored in that cell and replace anything that was previously there. Once you are finished typing you can finalize your entry by left clicking on another cell, pressing Enter to move one cell down, pressing Tab to move one cell to the right, or using the direction keys to move your active cell around the worksheet.

Note that if you wish to *edit* the information in a cell instead of replacing it you have to double click the cell instead of just selecting it. Alternatively, you can select the cell you wish to edit, click on the formula bar, and make changes directly from there.

**Undo and Redo**

Some useful commands you might find yourself using often are Undo and Redo.

When you undo something, it reverses the last action you took. If you then decide you liked things the way they were before the undo, use the redo command to revert the changes. The undo and redo buttons can usually be found in the quick access toolbar at the top left corner of your screen, though it's often easier to use their shortcuts. The shortcut for undo is Ctrl-Z and the shortcut for redo is Ctrl-Y.

## Deleting Data

To erase data from a cell, select the cells you wish to clear and press the Delete key, or right click on the selection and left click on "Clear Contents" in the contextual menu that appears.

| | | | | |
|---|---|---|---|---|
| 7 | Donald Trump | Business Exec | 18 | |
| 8 | Oprah Winfrey | Television Pr | 23 | |
| 9 | Jennifer Lawrence | Actress | 19 | |
| 10 | Michael Jordan | Baskeball Pla | 17 | |
| 11 | Brad Pitt | Actor | 22 | |
| 12 | Meryl Streep | Actress | 23 | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |

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- Cut
- Copy
- Paste Options:
- Paste Special...
- Smart Lookup
- Insert...
- Delete...
- Clear Contents
- Quick Analysis
- Filter ▸
- Sort ▸
- Insert Comment
- Format Cells...
- Pick From Drop-down List...
- Define Name...
- Hyperlink...

Sheet1 | **Sheet2** | Sheet3 | Sheet4 | Sheet5 | ⊕

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| | | | | | |
|---|---|---|---|---|---|
| 7 | Donald Trump | Business Exec | 18 | 15 | |
| 8 | Oprah Winfrey | Television Pr | 23 | 23 | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |

**Sheet1** | Sheet2 | Sheet3 | Sheet4 | ⊕

Ready

## Copy, Cut, and Paste

Copying and pasting data in Excel works a lot like copying and pasting in Microsoft Word and most other applications. To do this, select the cells you wish to copy, right click to bring up the contextual menu and left click "Copy." Select the cell you wish to paste to, then right click there and left click the leftmost icon under "Paste Options." To save time while copying and pasting, use the shortcuts Ctrl-C for copy and Ctrl-V for paste.

Besides copying and pasting, you can also cut and paste to move the contents of your selected cells to another location without leaving behind a copy. The shortcut for the Cut command is Ctrl-X.

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | Name | Title | | | | Hourly Rat | Hours Worked | |
| 2 | Homer Simpson | Nuclear Powerplant Technician | | | | 24 | 27 | |
| 3 | James Patterson | Author | | | | 18 | 32 | |
| 4 | Emma Stone | Actress | | | | 21 | 39 | |
| 5 | Bradley Cooper | Actor | | | | 17 | 16 | |
| 6 | Steven Spielberg | Movie Director | | | | 20 | 20 | |
| 7 | Donald Trump | Business Executive | | | | 18 | 15 | |
| 8 | Oprah Winfrey | Television Producer | | | | 23 | 23 | |
| 9 | Jennifer Lawrence | Actress | | | | 19 | 28 | |
| 10 | Brad Pitt | Actor | | | | 22 | 33 | |
| 11 | Meryl Streep | Actress | | | | 23 | 25 | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
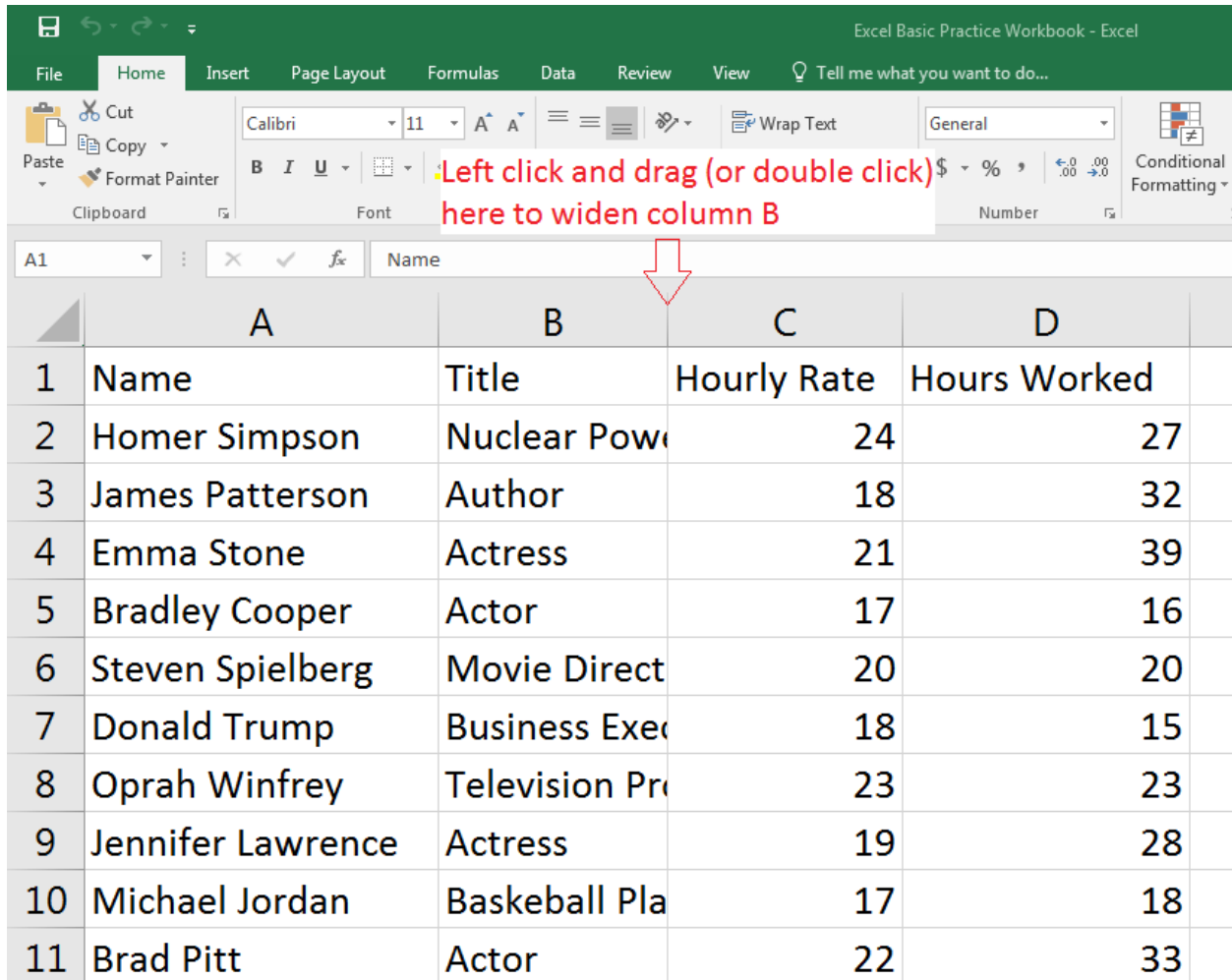
Alternatively, you can drag and drop cells from one place to another. To drag and drop, hover your cursor to one of the edges of your selection. Your cursor should transform into a four-way arrow. From here, hold down the left button and drag the selected cells to where you want them to go.

There are multiple paste options. These options do different things and can be used by left clicking on the appropriate icon when you go to paste something. For example, the Transpose Paste command will convert a copied or cut selection's rows to columns, or vice versa.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Name | Title | Hourly Rate | Hours Worked | | Hourly Rat | 24 | 18 | 21 | 17 | 20 | 18 | 23 | 19 | 22 | 23 |
| 2 | Homer Simpson | Nuclear Pow | 24 | 27 | | Hours Wo | 27 | 32 | 39 | 16 | 20 | 15 | 23 | 28 | 33 | 25 |
| 3 | James Patterson | Author | 18 | 32 | | | | | | | | | | | | |
| 4 | Emma Stone | Actress | 21 | 39 | | | | | | | | | | | | |
| 5 | Bradley Cooper | Actor | 17 | 16 | | | | | | | | | | | | |
| 6 | Steven Spielberg | Movie Direc | 20 | 20 | | | | | | | | | | | | |
| 7 | Donald Trump | Business Exe | 18 | 15 | | | | | | | | | | | | |
| 8 | Oprah Winfrey | Television P | 23 | 23 | | | | | | | | | | | | |
| 9 | Jennifer Lawrence | Actress | 19 | 28 | | | | | | | | | | | | |
| 10 | Brad Pitt | Actor | 22 | 33 | | | | | | | | | | | | |
| 11 | Meryl Streep | Actress | 23 | 25 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |

## Modifying Columns and Rows

If the data you enter is too long for a cell, you can alter the width of the columns or the height of the rows to accommodate the text. To change the width of a cell, place your cursor on the division between the column letters, left click and drag the column until the width is acceptable. Another option is to double click on the division between the two columns. This will **AutoFit** the column to fit the text.
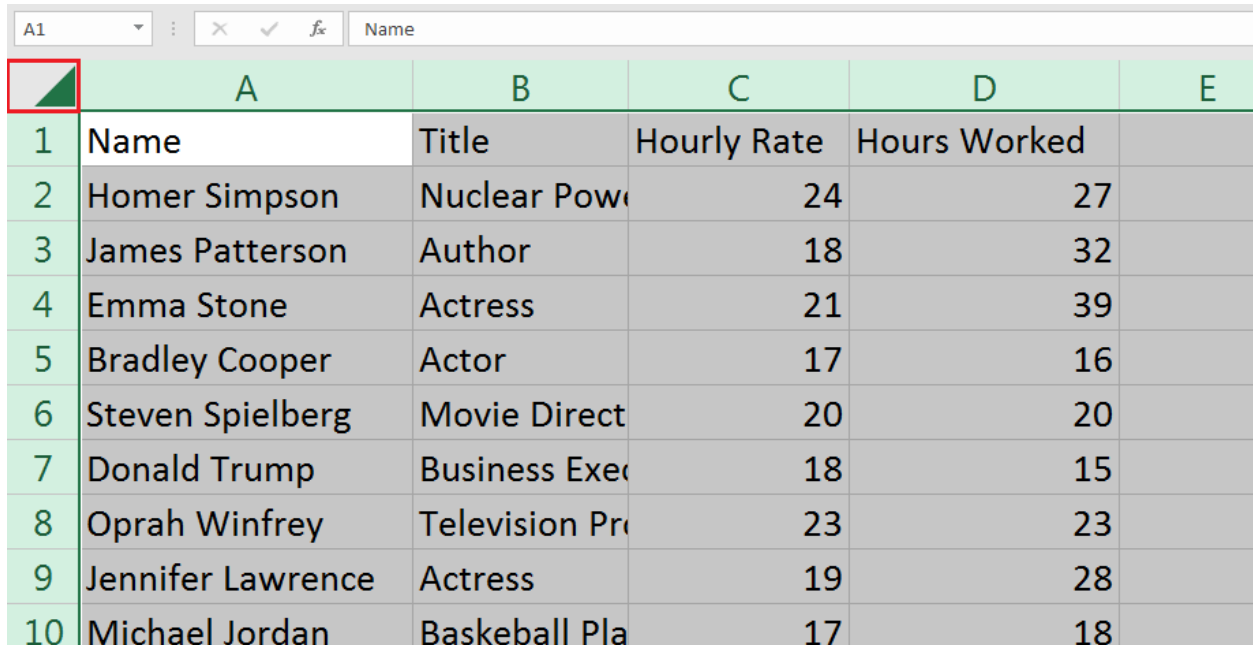
AutoFit works for row height as well, and you can also use it for several rows or columns at the same time. To do this, select the rows or columns you wish to AutoFit, then select the appropriate command from the **Format** drop-down menu on the **Home** ribbon.
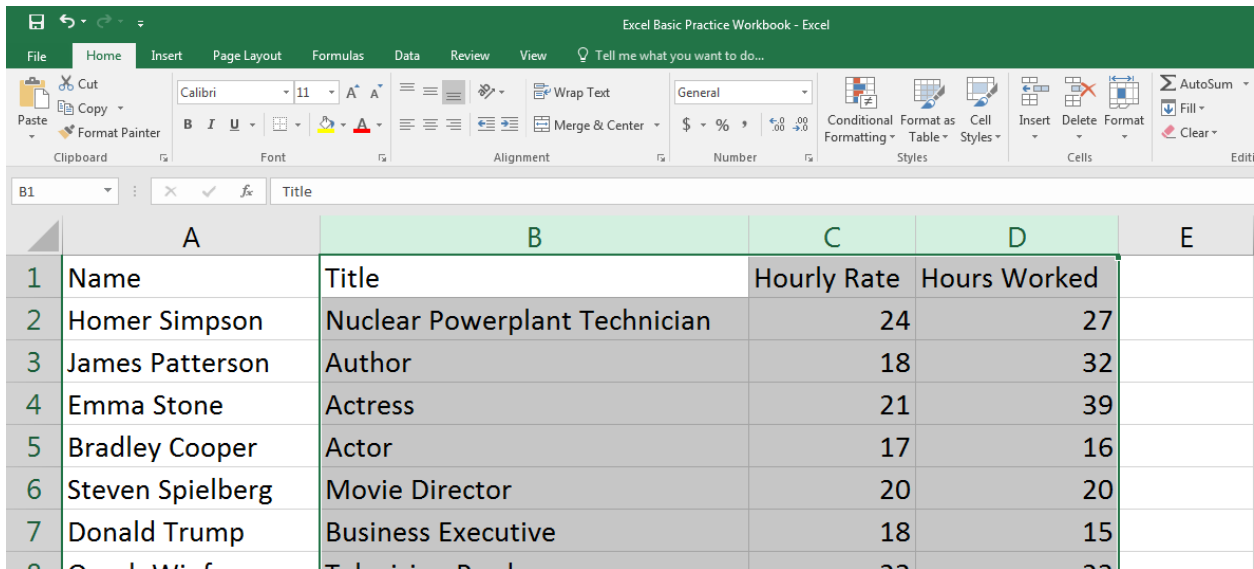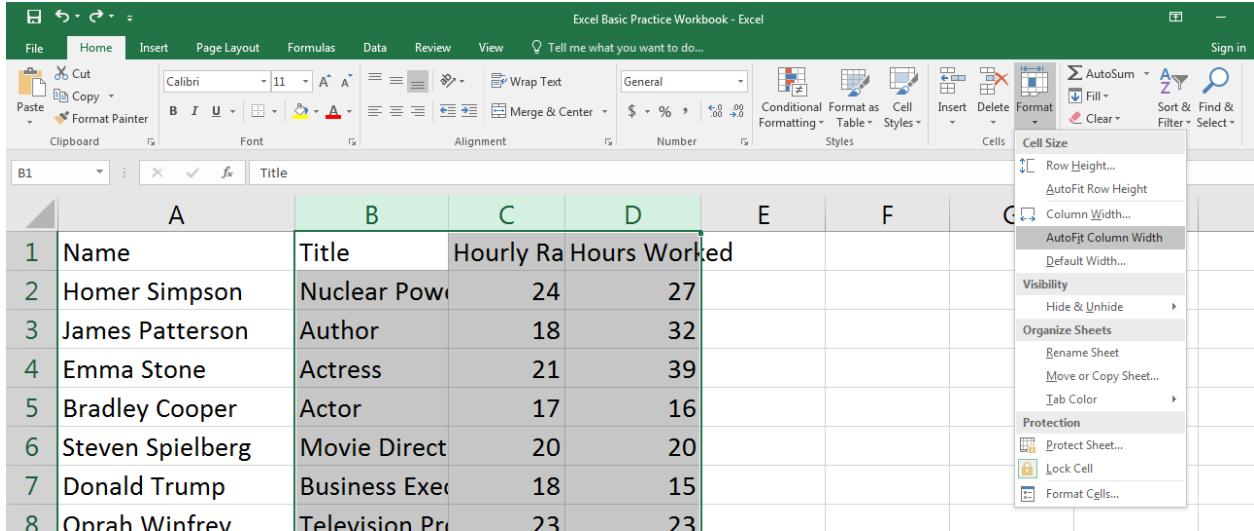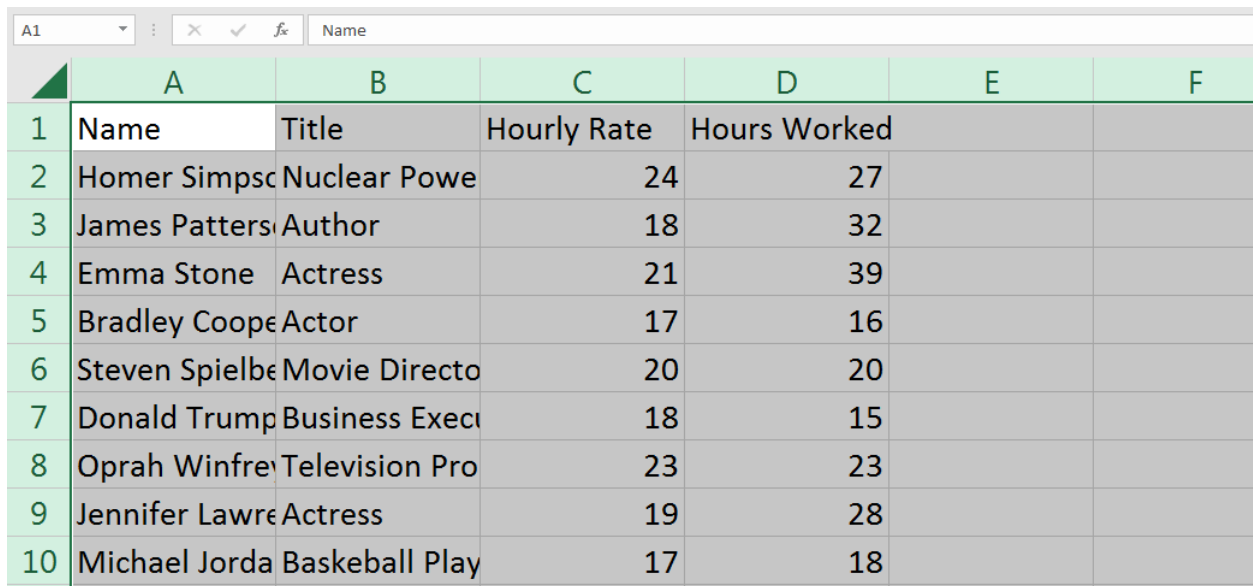
You can also modify every row and column in your spreadsheet at the same time. To do this, left click on the **Select All** button just below the name box.

| A1 | fx | Name | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 1 | Name | Title | Hourly Rate | Hours Worked | |
| 2 | Homer Simpson | Nuclear Pow | 24 | 27 | |
| 3 | James Patterson | Author | 18 | 32 | |
| 4 | Emma Stone | Actress | 21 | 39 | |
| 5 | Bradley Cooper | Actor | 17 | 16 | |
| 6 | Steven Spielberg | Movie Direct | 20 | 20 | |
| 7 | Donald Trump | Business Exec | 18 | 15 | |
| 8 | Oprah Winfrey | Television Pr | 23 | 23 | |
| 9 | Jennifer Lawrence | Actress | 19 | 28 | |
| 10 | Michael Jordan | Baskeball Pla | 17 | 18 | |

Then, hover your cursor over a row or column divider, and left click and drag until your rows or columns are the desired height or width.

| A1 | fx | Name | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| 1 | Name | Title | Hourly Rate | Hours Worked | | |
| 2 | Homer Simps | Nuclear Powe | 24 | 27 | | |
| 3 | James Patters | Author | 18 | 32 | | |
| 4 | Emma Stone | Actress | 21 | 39 | | |
| 5 | Bradley Coope | Actor | 17 | 16 | | |
| 6 | Steven Spielbe | Movie Directo | 20 | 20 | | |
| 7 | Donald Trump | Business Exec | 18 | 15 | | |
| 8 | Oprah Winfre | Television Pro | 23 | 23 | | |
| 9 | Jennifer Lawre | Actress | 19 | 28 | | |
| 10 | Michael Jorda | Baskeball Play | 17 | 18 | | |

## Inserting, Deleting, Moving, and Hiding

You can insert or delete columns and rows from your worksheet. To insert a column, select the column to the right of where you want your new column to appear, then right click on the selected column and left click on "Insert" in the contextual menu. This process works for rows as well.

To delete a column, select the column, then right click on the column and left click on "Delete" in the contextual menu. Adjacent cells will move into where the deleted cells were. This process works for rows as well. You can also delete a selection of cells instead of an entire row or column.
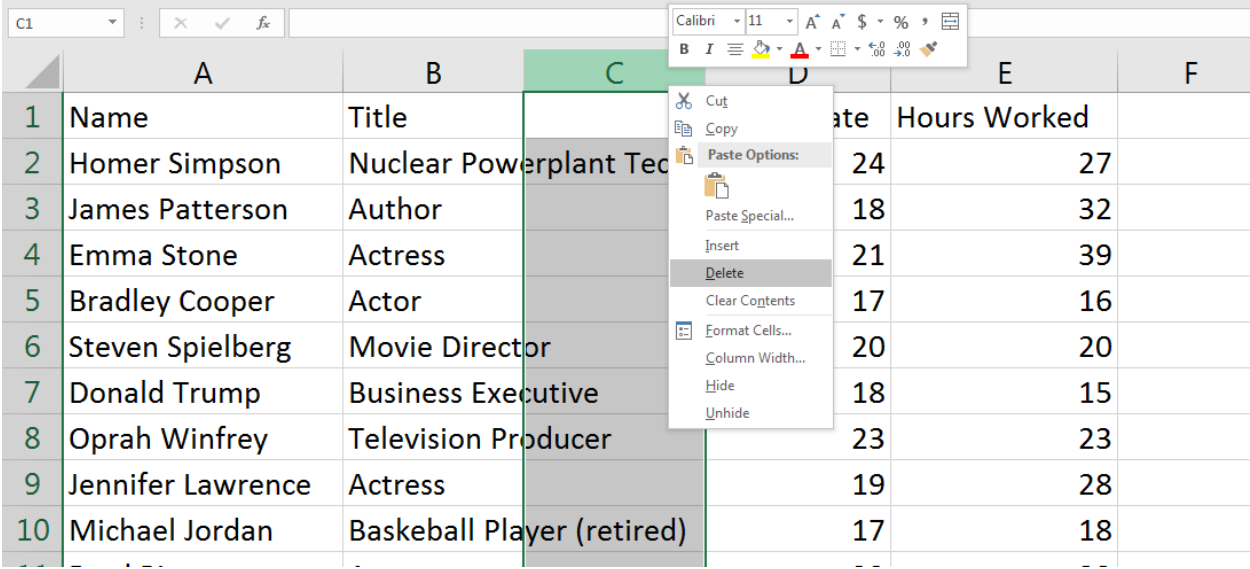


Sometimes you may want to move a column or row to rearrange the content of your worksheet. To move a column, first select and cut that column.
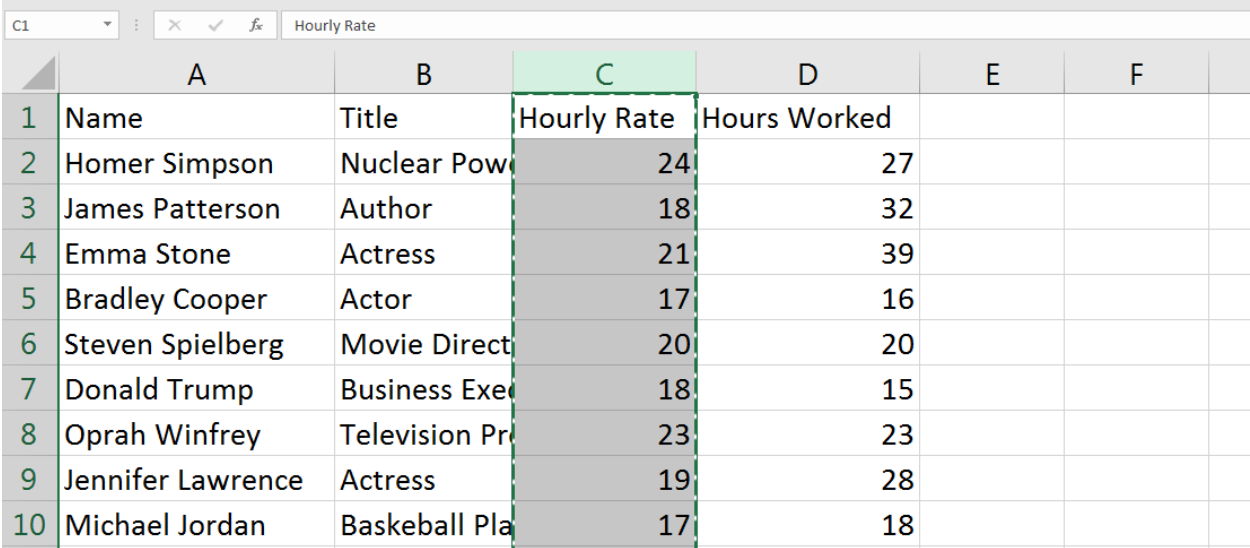
Then, select the column to the right of where you want to move your original column, right click on the selection and left click on "Insert Cut Cells" in the contextual menu. This will move the original column to the selected location and shift the surrounding columns accordingly. This process works for rows as well. Note that cutting and pasting a row or column does *not* produce the same effect.

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Name | Title | Hourly Rate | Hours Worked | | | |
| 2 | Homer Simpson | Nuclear Pow | 24 | 27 | | | |
| 3 | James Patterson | Author | 18 | 32 | | | |
| 4 | Emma Stone | Actress | 21 | 39 | | | |
| 5 | Bradley Cooper | Actor | 17 | 16 | | | |
| 6 | Steven Spielberg | Movie Direct | 20 | 20 | | | |
| 7 | Donald Trump | Business Exe | 18 | 15 | | | |
| 8 | Oprah Winfrey | Television Pr | 23 | 23 | | | |
| 9 | Jennifer Lawrence | Actress | 19 | 28 | | | |
| 10 | Michael Jordan | Baskeball Pla | 17 | 18 | | | |
| 11 | Brad Pitt | Actor | 22 | 33 | | | |

F1

Cut
Copy
Paste Options:
Paste Special...
Insert Cut Cells
Delete
Clear Contents
Format Cells...
Column Width...
Hide
Unhide

E1 — Hourly Rate

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Name | Title | Hours Worked | | Hourly Rate | |
| 2 | Homer Simpson | Nuclear Pow | 27 | | 24 | |
| 3 | James Patterson | Author | 32 | | 18 | |
| 4 | Emma Stone | Actress | 39 | | 21 | |
| 5 | Bradley Cooper | Actor | 16 | | 17 | |
| 6 | Steven Spielberg | Movie Direct | 20 | | 20 | |
| 7 | Donald Trump | Business Exe | 15 | | 18 | |
| 8 | Oprah Winfrey | Television Pr | 23 | | 23 | |
| 9 | Jennifer Lawrence | Actress | 28 | | 19 | |
| 10 | Michael Jordan | Baskeball Pla | 18 | | 17 | |
| 11 | Brad Pitt | Actor | 33 | | 22 | |

At times you may want to temporarily remove part of a worksheet from sight if things become too cluttered or unwieldy. To hide one or more columns, select those columns, right click on the selection and left click on "Hide" in the contextual menu. A vertical line will appear between the columns to the left and right of the hidden section to remind you that there hidden columns there.

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Smith Family Budget 2015** | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | Income | Mortgage | Utilities | Cell Phor | Groceries | Pet Care | Dining | Auto Ga |
| 4 | 1/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 5 | 2/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 6 | 3/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 7 | 4/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 8 | 5/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 9 | 6/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |
| 10 | 7/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $20 | | |

| | A | B | C | D | E | F | I |
|---|---|---|---|---|---|---|---|
| 1 | **Smith Family Budget 2015** | | | | | | |
| 2 | | | | | | | |
| 3 | | Income | Mortgage | Utilities | Cell Phor | Groceries | Auto Gas and A |
| 4 | 1/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 5 | 2/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 6 | 3/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 7 | 4/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 8 | 5/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 9 | 6/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |
| 10 | 7/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $150 |

To unhide hidden columns, select the columns to the left and right of the hidden section, right click the selection, and then left click on "Unhide" in the contextual menu. This process works for rows as well.



## Wrapping Text and Merging Cells

When you have too much content in a cell, you may want to wrap the text or merge multiple cells together in order to make your worksheet more readable without widening the columns. To wrap text, select the cells you want to alter and left click the "Wrap Text" button on the **Home** ribbon.

| | Income | Mortgage | Utilities | Cell Phone | Groceries | Pet Care | Dinin Out |
|---|---|---|---|---|---|---|---|
| 1/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $200 | $ |
| 2/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $200 | $ |

Merge cells together by selecting the cells you want to combine and then left clicking on the "Merge & Center" button or one of the options in its drop-down menu.



| | Income | Mortgage | Utilities | Cell Phone | Groceries | Pet Care | Dining Out | Auto Ga and Mainten |
|---|---|---|---|---|---|---|---|---|
| 1/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $200 | $100 | |
| 2/1/15 | $7,000 | $2,000 | $500 | $125 | $700 | $200 | $100 | |

**Formatting Cells**

Like Microsoft Word, Excel offers many ways to alter the look of your worksheets. Features include the ability to edit **font size**, **font color**, **text alignment**, as well as **bold**, *italic*, and <u>underline</u>. You can also use the "Fill Color" button to **highlight** one or more cells, add **borders** to cells, or apply **cell styles**.
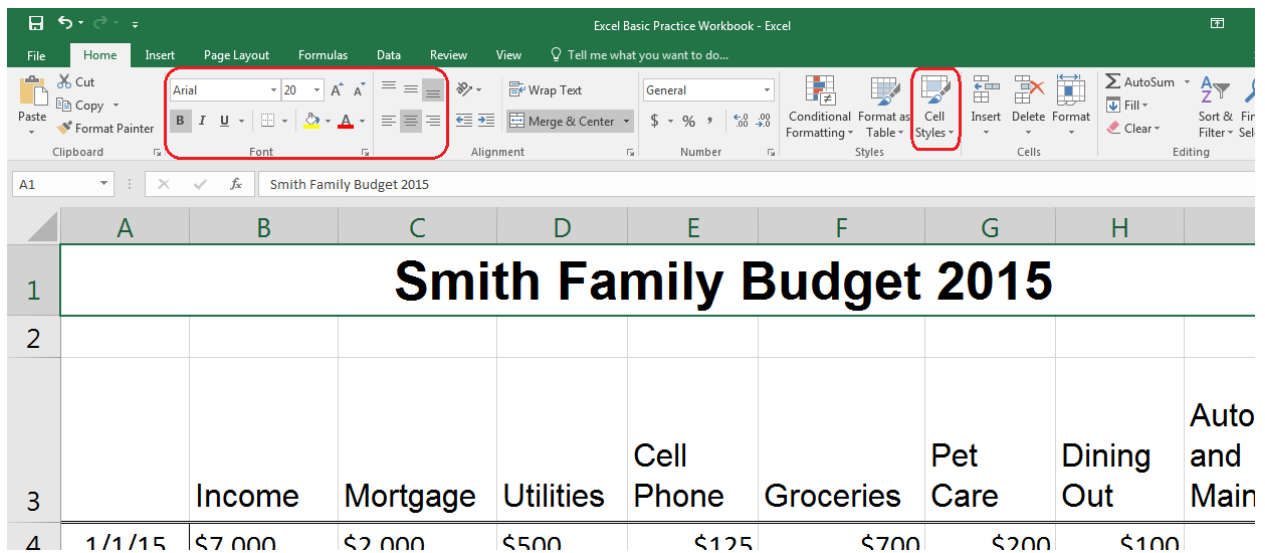


**Number Formats**

Excel allows you to present numerical data in a number of ways to make things easier to read and use. To adjust the number formatting of a section of your spreadsheet, select the cells you want to affect and use the number format options on the Home ribbon to make changes.
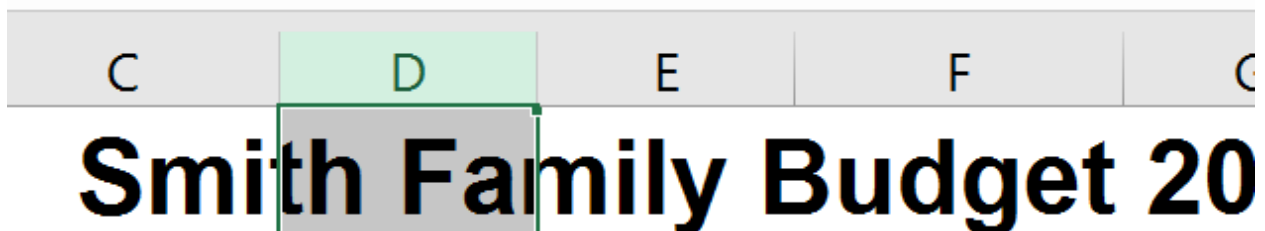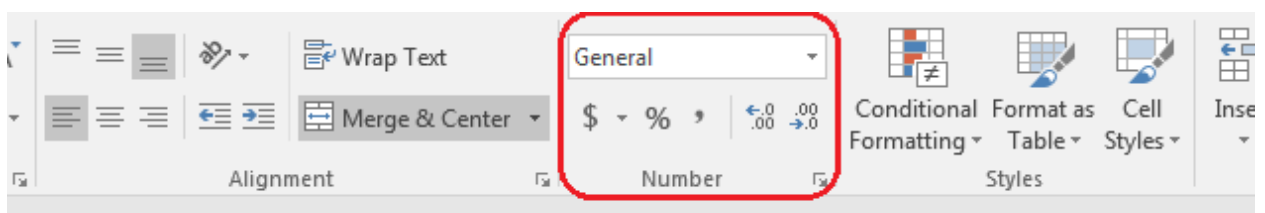
**Printing Options**

The **Page Layout** tab allows you to adjust how your spreadsheets will look when you print them.
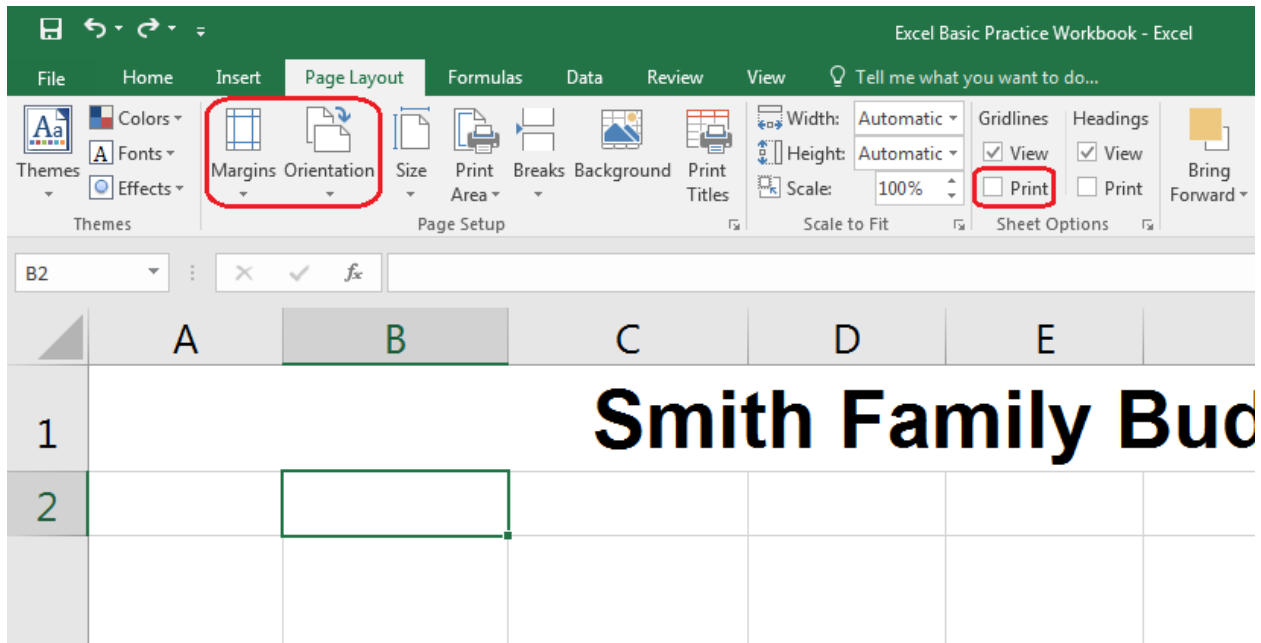


The **Orientation** drop-down menu allows you to switch between the portrait and landscape layouts, and you can use the **Margins** menu to change how much white space will appear on each side of your spreadsheet when you print it. If you want your spreadsheet to be printed with the gridlines you see on screen, make sure to check that box before you print.

Sometimes your worksheets may be too wide to fit all your columns on a single page, even when you set your worksheets in landscape orientation. If this happens, try using the **scaling** drop-down menu on the print preview page to adjust the look of your spreadsheet. Note that this may shrink the size of your spreadsheets as they are printed.

If you have multiple worksheets in your workbook, when you print you need to choose whether to only print the active sheet or all of them at once.

**Formulas and Functions**

Open the *Formula Tutorial* workbook and run through the "Basics" and "Introduction to Functions" sheets for an overview of **formulas**, **functions**, and **cell references**.

On the **Formulas** ribbon, select a range of cells and click on the "AutoSum" button to add the value of those cells together using that function, or select a blank cell and click on the "Insert Function" button to use to a more complicated function.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Name | Title | Hourly Rate | Hours Worked | |
| 2 | Homer Simpson | Nuclear Pow | 24 | 27 | |
| 3 | James Patterson | Author | 18 | 32 | |
| 4 | Emma Stone | Actress | 21 | 39 | |
| 5 | Bradley Cooper | Actor | 17 | 16 | |
| 6 | Steven Spielberg | Movie Direct | 20 | 20 | |
| 7 | Donald Trump | Business Exe | 18 | 15 | |
| 8 | Oprah Winfrey | Television Pr | 23 | 23 | |
| 9 | Jennifer Lawrence | Actress | 19 | 28 | |
| 10 | Michael Jordan | Baskeball Pla | 17 | 18 | |
| 11 | Brad Pitt | Actor | 22 | 33 | |
| 12 | Meryl Streep | Actress | 23 | 25 | |
| 13 | | | | 276 | |
| 14 | | | | | |
| 15 | | | | | |

**Autofill**

Open the *Welcome to Excel* workbook and run through the "Fill" sheet for an overview of **autofill**.

**More Resources**

Library books and DVDs

GCFLearnFree.org

Lynda.com

Gale Courses

Youtube.com

Google or another search engine